

브루셀라증

Brucellosis

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Abstract

Brucellosis is a systemic bacterial disease with an acute or insidious onset, characterized by continued, intermittent, or irregular fever of variable duration, headache, weakness, sweating, chills, arthralgia, depression, weight loss, and generalized aching. It is predominantly an occupational disease among those working with infected animals or their tissues, especially farm workers, veterinarians, and abattoir workers. Brucellosis has been an emerging disease since the discovery of *Brucella melitensis* by Bruce in 1887. Worldwide, brucellosis remains a major source of disease in humans and domesticated animals. Although the reported incidence and prevalence of the disease vary widely from country to country, bovine brucellosis caused mainly by *B. abortus* is still the most widespread form, also occurring in Korea. The vaccination for *Brucella* was first done on cows in 1998. After inoculation, *Brucella* developed in a group of cows. And then the first human case occurred in 2002, followed by 16 cases in 2003 by *B. abortus*. Prevention of brucellosis in humans still depends on the eradication or control of the disease in animal hosts, hygienic precautions to limit the exposure to infection through occupational activities, and effective heating of dairy products or other potentially contaminated foods. Physicians and veterinarians should be concerned about specific environments and clinical patterns of brucellosis. They should make efforts to recognize, evaluate, and control brucellosis.

Keywords : **Brucellosis; Zoonosis; Occupation; Veterinarians**

: ; ; ;

(Brucellosis, Undulant fever, Malta fever, Mediterranean fever) 2000

8

3

(1).

,

,

(2, 3).

가

(4~6),

(7)

(8).

(9),

1939

*Brucella abortus*가

, 2001

가 (5), , ,
(8). 2002 1 , 2003 16 (10).
가 , ,
. , 가 37
, , .
. 15 .
5 , 4 , 5 ,
15 , 37 (9).
1. 2.
1861 Malta 1947 ,
Marston 가
. Bruce , 1955 165
5 1887 2 가
. (9). 1960
B. suis,
B. abortus (11).
Brucella . 1895 1955
Bang *B. abortus* 2 1985 100 . 1990
. 1914 Traum 500 1994 501 , 1995 322 ,
B. suis . 1964 1996 620 , 1997 912 , 1998 988 , 1999
Carmichael *B. canis* 666 , 2000 1,249 , 2001 754 , 2002 845
(9). 2003 1,088 (9, 12).
B. melitensis, *B. abortus*, *B. suis*,
B. canis, *B. ovis* *B. neotomae* 6 .
B. maris ㅁ (5). . , .
B. abortus , (7~8), ,
. *B. melitensis* , , , , , ,
, *B. suis* , , , , ,
가 . *B. canis* (9).

3. test, STA) 가 1 : 160
- 1) 14 (15). 1995 ~ 1996
- 47가 가 2,372
- B. melitensis* , , 가
- . *B. abortus* , *B. suis* 7 (16). 2001 K 174
- , *B. canis* . 가 STA 5
- , , , , , 4 (Enzyme - linked
- , , immunosorbent assay, ELISA) IgM, IgG
- , 가 (15).
- 2002 10
- (8), , 41
- (5). 가
- (17). 2003
- (13). 100
- 2) 17
- , 3
- . , 1 (18). 2003 16
- , 가 가
- , , 12 , 2 , 1 , 1
- . 가 (19). 가 13
- 가 1970 , 가 3 , 30 가 3 , 40 가 10 , 50 가
- , 100 ~ 200 (0.5 /10 3 . 8 , 4 , 4
-) (14). . 3 3 , 5 1 , 6 1 , 7 3 , 8
- 1939 1 , 9 4 , 10 2 , 11 1 . 2004
- B. abortus* 가 7 45 가 (20).
- (8). 1986 , 1988
- 3)
- 425 44 10 (7 ~ 21)
- 3 ~ 6
- (Standard tube agglutination . , ,

1.

Organs	Clinical Manifestation
Gastrointestinal system	nausea, vomiting, constipation, diarrhea, abdominal pain
Hepatobiliary system	slight increase of hepatic enzyme, liver abscess
Musculoskeletal system	arthritis in knees, hip, shoulder joint, 30% of patient osteomyelitis in lumbar or sacrum
Nerve system	meningitis, encephalitis, brain abscess
Cardiovascular system	endocarditis (2%), aneurysm in artery, most important cause of death
Respiratory system	infected by droplet in a slaughterhouse, bronchitis, pneumonia, abscess
Urinary system	epididymitis, orchitis, prostatitis, nephritis
Hematopoietic system	granuloma in bone marrow, anemia, leukopenia, thrombocytopenia
Others	conjunctivitis, keratitis, corneal ulcer, uveitis, optic neuritis

2.

(2002. 1 ~ 2004. 3, N=17)

2%

Symptoms	No. of Patient	Positive Rate (%)
Fever	5	29.4
Chill	2	11.8
Night Sweat	1	5.9
Malaise	5	29.4
Arthralgia	3	17.6
Myalgia	4	23.5
Anorexia	2	11.8
Headache	3	17.6
Weight loss	4	23.5
Dizziness	1	5.9

B. melitensis

(8).

(22)

가

가

2002

2004

17

가

가

(2).

7

180

,

(9, 21 ~ 23).

3 ~ 6

(24).

6 ~ 12

80%

1 ~ 2

4)

(5, 가

가가 1 : 160

7, 22),

, 가가 2

4

(1).

20 ~ 60%

가

가

2 ~ 20%

(25)

가

3.

Test	Acute Brucellosis		Chronic Brucellosis	
	Sensitivity	Specificity	Sensitivity	Specificity
Blood and bone marrow culture	53	100	5	100
Serum agglutination test : titer 160	92	100	45	100
Enzyme - linked immunosorbent assay				
IgG 1,600mg/dL	98	98	100	98
IgM 100mg/dL	100	36	82	36
IgA 100mg/dL	99	89	89	100

IgM, IgG ELISA kit 29 , 28 , 0 , 1
가 .
가 .
4 1998 1
가 (15).
PCR(Polymerase chain reaction)
(6). 1990 가
3 (26).
1998 3 5
5ml 12 4
70
2 가
1~2ml 4 1998 9 38 7,798
가 가
6,400 가
5) (27) 500
1995 3 가
(RB51) 1998 12 30 가
가
350 160 가
190 , , 가

가 200mg 1 6
가 600~900mg 1 6
가 2
2 500mg
1999 2 6 4 6 1g
1 8 1 3 (9, 15).
가 가
1,000 (5).
가 ,
37 40 ,
4가 .
(24).
가 가 7)
가 3
7
1 : 160 가
2 가가 4
가 가 (28).
가
(6) , ,
가 , ,
6) 가
200mg (, ,
1 6 1g , ,)
1 6 , ,

[illegible]

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28. . . . : , 2002
29. , .